

CLAIM AMENDMENTS

1 - 19. (canceled)

1 20. (currently amended) A method for implementing
2 internetworking of a set of Content Delivery Networks provided with
3 respective caches,
4 respective Directory Name Service or Domain Name Servers,
5 respective content distribution systems to respective
6 clients, and

7 interface components each susceptible of being associated
8 with a respective network in the set of networks and co-operating
9 with at least one similar interface component associated with
10 another network in the set of networks,
11 the method comprising the steps of:

12 collecting in the interface components content-related
13 data related to the association of the contents and the caches that
14 contain them; and

15 transferring routing data obtained by processing the
16 content-related data from at least one of the interface components
17 to the Directory Name Service or Domain Name Server of the
18 respective network so as to update tables of the Directory Name
19 Server or Domain Name Server that is different from the
20 interface component such that access by the client of the

21 respective network to the contents of the networks in the set of
22 CDN is implemented through the Directory Name Service or Domain
23 Name Server of the network.

24 21. (previously presented) The method defined in claim
25 20 wherein the following steps are performed by at least one of the
26 interface components:

27 receiving data on the state of the caches of the contents
28 of the respective network,

29 determining whether the contents require an updating or
30 not, and

31 managing the updating by performing at least one step in
32 the following group comprising:

33 editing the respective database,

34 editing the respective Directory Name Service tables,

35 editing the respective log file archive, and

36 forwarding an update request message to the similar
37 component.

1 22. (previously presented) The method defined in claim
2 21 wherein the interface components communicate via a CNAP
3 protocol.

1 23. (currently amended) A system comprising a set of
2 internetworked Content Delivery Networks provided with

3 respective caches,
4 respective Directory Name Service or Domain Name Server,
5 respective content distribution systems to respective
6 clients, and
7 interface components susceptible of each being associated
8 with a respective network in the set of networks and co-operating
9 with at least one similar interface component associated with
10 another network in the set of networks, the interface components
11 being configured to collect content-related data related to the
12 association of the contents and the caches that contain them, at
13 least one of the interface components being configured to transfer
14 routing data obtained by processing the content-related data, ~~at~~
15 ~~least one of the interface components the routing data~~ to the
16 Directory Name Service or Domain Name Server of the respective
17 network [[,]] so as to update tables of the Directory Name Service
18 or Domain Name Server that [[are]] is different from the interface
19 component so that access by the client of the respective network to
20 the contents of the networks in the set of CDN is implemented
21 through the Directory Name Service or Domain Name Server of the
22 network.

1 24. (previously presented) The system defined in claim
2 23 wherein the interface components each comprise:
3 a module for receiving data on the state of the cache
4 and/or of the contents of the respective network,

5 a module for determining whether the contents require an
6 updating or not, and
7 a module for managing the updating by performing at least
8 one step in the following group comprising:
9 editing the respective database,
10 editing the respective Directory Name Service
11 tables,
12 editing the respective log file archive, and
13 forwarding an update request message to the similar
14 component.

1 25. (previously presented) The system defined in claim
2 24 wherein the interface components communicate via a CNAP
3 protocol.

1 26. (currently amended) An interface component for
2 implementing Content Delivery Network CDN internetworking, the
3 networks being comprised in a set and being provided with
4 respective caches,
5 respective Directory Name Service or Domain Name Servers,
6 and
7 respective content distribution systems to respective
8 clients, the interface component being susceptible of being
9 associated with a respective network in the set of networks and
10 co-operating with at least one similar interface component

11 associated with another network in the set of networks, the
12 interface component being configured to collect content-related
13 routing data related to the association of the contents and the
14 caches that contain them, the interface component comprising:

15 at least one first interface module for exchanging data
16 with the similar component,

17 a second interface module for interfacing with the
18 Directory Name Service of the respective network, and

19 a core for collecting and processing the data received by
20 the interface component and routing respective requests, whereby
21 the interface component is susceptible of transferring routing data
22 obtained by processing the content-related data to the Directory
23 Name Service or Domain Name Server of the respective network via
24 the second interface module, the routing data being used to update
25 tables of the Directory Name Service or Domain Name Server that
26 is different from the interface component.

1 27. (previously presented) The interface component
2 defined in claim 26 wherein the interface component is configured
3 to be controlled by a monitoring system and comprises:

4 a third interface module for retrieving data on the
5 availability of contents from the content distribution system on
6 the respective network, and

7 a fourth interface module for interacting with the
8 monitoring system.

1 28. (previously presented) The interface component
2 defined in claim 26 wherein the core comprises:

3 a module for receiving data from the interface modules
4 and extracting data on the status of the caches and/or of the
5 contents of the respective network therefrom, a module for
6 determining whether the contents require an updating or not, and
7 a module for managing the updating by performing at least
8 one step in the following group comprising:

9 editing the respective database,
10 editing the respective Directory Name Service tables,
11 editing the respective log file archive, and
12 forwarding an update request message to the similar
13 interface component.

1 29. (previously presented) The interface component
2 defined in claim 28 wherein each first interface module is
3 configured to communicate with another first interface module of
4 the similar component via CNAP protocol.

1 30. (previously presented) The interface component
2 defined in claim 29 wherein each first interface module is
3 configured to translate from the CNAP protocol to a format that can
4 be understood by a core of another interface component.

5 31. (previously presented) The interface component
6 defined in claim 30 wherein the communication between the first
7 interface module and another first interface module of a similar
8 interface component comprises the transmission of signals
9 indicating quantities from the following group comprising:

10 ID of the network in which the interface component is
11 associated,

12 IP address of the computer hosting the local interface
13 component,

14 ID's of interconnected systems via the interface
15 component and the similar interface component,
16 IP addresses of the remote interface components of the
17 internetworking systems,

18 level of confidences of the internetworking network
19 connection, and

20 at least one identification of physical characteristics,
21 such as the geographical distance of the connection between the
22 interfacing component and the similar interface component.

1 32. (previously presented) The interface component
2 defined in claim 26 wherein each first interface module is
3 configured to exchange information with a similar interface
4 component via an IP transportation protocol such as the TCP
5 protocol.

1 33. (previously presented) The interface component
2 defined in claim 26 wherein the core and the first interface module
3 are configured to exchange signals indicating quantities selected
4 from the following group:

5 URL identifying the content to which the message refers,
6 IP address of the cache that distributes the content,
7 ID of the Content Delivery Network to which the cache
8 belongs,
9 cache state,
10 content state in the cache, and
11 life time of routing data.

1 34. (previously presented) The interface component
2 defined in claim 27 wherein the fourth interface module is
3 configured to transfer to the core signals indicating quantities
4 from the following group comprising:

5 IP address of the cache to which the message refers,
6 percentage of CPU used by the cache,
7 percentage of RAM used by the cache,
8 percentage of disc used by the cache, and
9 percentage of users connected in relation to the maximum
10 capacity of the involved cache service.

1 35. (previously presented) The interface component
2 defined in claim 27 wherein the third interface module is
3 configured to send to the core signals indicating quantities from
4 the following group comprising:

5 URL identifying the content to which the message refers,
6 list of IP addresses of the caches of the content,
7 level of confidence of the content,
8 level of availability of the content,
9 cache state,
10 life time of routing data.

1 36. (previously presented) The interface component
2 defined in claim 35 wherein the quantity identifying the level of
3 confidence of the content is susceptible of assuming distinct
4 levels corresponding to at least one first level of confidence in
5 the group comprising:

6 a first level of confidence indicating that the contents
7 may be exchanged by all networks in the set of networks, and
8 a second level of confidence indicating that the contents
9 may be exchanged on by a selectively determined subset of networks
10 in the set of networks.

1 37. (previously presented) The interface component
2 defined in claim 26 wherein second interface module is configured
3 to communicate with the Directory Name Server to update respective

4 tables on the basis of signals indicating quantities from the
5 following group comprising:
6 ID of the operation to be carried out on the table of the server,
7 such as addition or deletion,
8 type of register,
9 name of the domain to which the message refers,
10 entire URL of the content to which the message refers,
11 IP address of the best cache to serve the domain, and
12 life time of the register.

1 38. (previously presented) The interface component
2 defined in claim 26 wherein the core module comprises a memory
3 hosting a data structure containing information on the state of the
4 respective Content Delivery Network and similar internetworking
5 networks.